

Laura Taylor-Chase

Title: Mini Compost Pile

Grade: 1

Subjects: Science, Writing

45-60 min.

Objectives:

- Students will be able to observe and describe the cyclic nature of life.
- Appreciate the importance of a balanced eco system.
- Students will compare and contrast biodegradable and non-biodegradable resources in nature.

Domain:3c

- Engage students learning.

Standards:

- Science Standard 1.1a - Animals need air, water, and food in order to live and thrive.
- Writing Standard 1.1 -Write opinion pieces in which students introduce a topic, state an opinion, supply a reason for the opinion, and produce some sense of closure.

Teacher Preparation:

(Numbers will vary depending on whether the teacher prefers students to work individually or in groups.) Each student (or group) will need: a clear plastic 2 liter bottle, scissors, tape, sandwich bag full of kitchen waste, sandwich bag full of garden waste, about two pounds of rich healthy soil, a water bottle, non biodegradable items (like nails, part of an aluminum can, plastic), and several earthworms or red wigglers. (Worms are recommended, but optional. Many websites sell appropriate worms.)

Outline(with times)

10 min.

Introduction: Why Compost?

Explain to the students why it is important to compost. This will give them a background on what actually happens in a compost pile if done correctly, the benefits of composting, and instructions on how to create a compost pile. Consider using www.pebblego.com to show a short video on compost.

30 min.

Create a mini-compost pile,

The teacher will break students into groups of three or four. One member of each group must bring: -a clear and clean two-liter bottle.

-one sandwich bag full of organic food waste like vegetable peels, fruit peels, seeds, coffee grounds and filters, eggshells, nutshells, and other food scraps. (Do not use dairy or meat products- they will smell and attract bugs!).

-one sandwich bag full of organic garden waste like clippings, sawdust, wood chips, straw,leaves, weeds, paper, and other garden wastes.

-a few small non-biodegradable items like glass, aluminum foil, and styrofoam.

-two pounds of rich, dark, healthy soil.

10 min.

Questions for students to answer after watching the video or after creating a mini compost pile.

1. What happens to your waste when you throw it in the garbage? Is it reused or recycled?

2. What are some advantages of composting and recycling waste instead of throwing it in the garbage?
3. How do you think the results of this experiment will affect your consumption habits?
4. How do you think the results of this experiment will affect how you dispose of your waste?
5. How does composting affect the size of your Ecological Footprint?

Extention :

Students may want to describe the weekly progress in a mini compost pile in a weekly journal. Be sure the description includes a comparison between the biodegradable and non biodegradable items. In their first journal entries, students should make predictions about what will or will not decompose and which items will decompose the quickest.

Assessment:

Rubric on Writing Journals

Level 4= All complete, student writes in complete sentences and support answers with evidence.

Level 3= Most work complete, student writes in complete sentences and supports answers.

Level 2= Some work complete, students writes in complete sentences with little support.

Level 1= Students writes in phrases, unsupported answers.